

Claims

1. A G-Protein-coupled receptor-polypeptide according to SEQ ID No. 1 to SEQ ID No. 3.
2. A polypeptide according to claim 1, wherein the polypeptide is a fusion protein.
3. A nucleic acid encoding a polypeptide according to claim 1.
4. A nucleic acid according to claim 3, wherein the nucleic acid is contained in a knock-out gene construct, an expression construct, or in a vector selected from the group consisting of plasmids, shuttle vectors, phagemids, cosmids, expression vectors or vectors which are applicable in gene therapy.
5. A cell, containing a nucleic acid according to claim 3, or transformed with a vector, a knock-out gene construct or an expression construct according to claim 4.
6. A cell according to claim 5, wherein the cell is an heterologous or autologous cell, preferably a skin cell, a keratinocyte, a fibroblast or an endothelial cell.
7. A transgene embryonic non-human stem cell, wherein the stem cell contains a nucleic acid according to claim 3, preferably in the form of a vector, a knock-out gene construct or an expression construct containing the nucleic acid.
8. A transgenic non-human mammal, wherein its genome contains a nucleic acid according to claim 3, preferably in the form of a vector, a knock-out gene construct or an expression construct.

9. An antibody or an antibody fragment, wherein the antibody or antibody fragment is directed against a polypeptide according to claim 1 or against a nucleic acid according to claim 3.
10. A test for identification of pharmacologically active substances, wherein the test contains at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide, and/or at least one transgenic non-human mammal containing the nucleic acid encoding the polypeptide, optionally combined or together with suitable additives or auxiliaries.
11. A test according to claim 10, wherein at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide, is bound to a solid-phase.
12. An array fixated to a carrier material, wherein the array contains at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide.
13. A diagnostic, wherein it contains at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid

encoding the polypeptide, optionally combined or together with suitable additives or auxiliaries.

14. A diagnostic according to claim 13, wherein it contains a probe, preferentially a DNA probe.
15. A pharmaceutical, wherein it contains at least one polypeptide according to claim 1 and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide, optionally combined or together with suitable additives or auxiliaries.
16. A method of using at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide, for production of a pharmaceutical preparation for diagnosis and/or prevention and/or treatment of skin disorders, and/or for treatment of wound healing and/or disorders of wound healing.
17. A method of producing a polypeptide, wherein a nucleic acid according to claim 1 is expressed in a suitable cell and, if appropriate, isolated.
18. A method of producing a transgene non-human mammal, wherein a transgenic embryonic non-human stem cell according to claim 7 is regenerated to a transgenic non-human mammal.
19. A method of producing an antibody or an antibody fragment, preferably a polyclonal or a monoclonal antibody or antibody fragment, wherein an

antibody producing organism is immunized with a polypeptide according to claim 1 or with a nucleic acid encoding the polypeptide.

20. A method of producing a diagnostic or a pharmaceutical, wherein at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide, is combined with suitable additives or auxiliaries.
21. A method of producing an array fixated to a carrier material, wherein at least one polypeptide according to claim 1, and/or at least one nucleic acid encoding the polypeptide, and/or at least one antibody or an antibody fragment directed against the polypeptide, and/or at least one cell expressing the polypeptide or the nucleic acid encoding the polypeptide, is fixated to said carrier material.
22. A method of using a test according to claim 10 for the identification of pharmacologically active substances in connection with diseases, preferably skin diseases, wound healing and/or disorders of wound healing.
23. A method of using an array according to claim 12 for analysis and/or diagnosis of diseases, preferably of skin diseases, wound healing and/or disorders of wound healing.
24. A method of using a G-protein coupled receptor-polypeptide according to the sequence of SEQ ID No. 4, and/or a nucleic acid encoding the polypeptide, and/or an antibody or antibody fragment directed against the polypeptide, and/or a cell containing the polypeptide or a nucleic acid encoding the polypeptide, and/or one fusion protein containing the polypeptide, for diagnosis, prevention and/or treatment of skin diseases,

and/or for diagnosis and/or treatment in wound healing and/or disorders of wound healing.

25. A method of using a G-protein coupled receptor-polypeptide according to the sequence of SEQ ID No. 4, and/or a nucleic acid encoding the polypeptide, and/or an antibody or antibody fragment directed against the polypeptide, and/or a cell containing the polypeptide or a nucleic acid encoding the polypeptide, and/or a fusion protein containing the polypeptide, for identification of pharmacologically active substances in connection with skin diseases, wound healing and/or disorders of wound healing.
26. A method of using a G-protein coupled receptor-polypeptide according to the sequence of SEQ ID No. 4, and/or a nucleic acid encoding the polypeptide, and/or an antibody or antibody fragment directed against the polypeptide, and/or a cell containing the polypeptide or a nucleic acid encoding the polypeptide, and/or a fusion protein containing the polypeptide, for the production of a test for identification of pharmacologically active substances in connection with of skin diseases, wound healing and/or disorders of wound healing.
27. A method of using according to claim 26, wherein in order to produce the test, a polypeptide according to the sequence of SEQ ID No. 4, and/or a nucleic acid encoding the polypeptide, and/or an antibody or antibody fragment directed against the polypeptide, and/or a fusion protein containing the polypeptide, and/or a cell expressing the polypeptide or the nucleic acid encoding the polypeptide is bound to a solid phase.
28. A method of using a G-protein coupled receptor-polypeptide according to the sequence of SEQ ID No. 4, and/or a nucleic acid encoding the polypeptide, and/or an antibody or antibody fragment directed against the

polypeptide, and/or a fusion protein containing the polypeptide, and/or a cell expressing the polypeptide or the nucleic acid encoding the polypeptide, for the production of an array fixated to a carrier material for the analysis of skin diseases, wound healing and/or disorders of wound healing.

29. A method of using according to one of claims 24 to 26 or 28, wherein the nucleic acid is contained in a knock-out gene construct, an expression construct, or in a vector selected from the group consisting of plasmids, shuttle vectors, phagemids, cosmids, expression vectors and vectors which is applicable in gene therapy.
30. A method of using according to one of claims 24 to 26 and 28, wherein the cell is an heterologous or autologous cell, preferably a skin cell, a keratinocyte, a fibroblast or an endothelial cell.
31. A method of using the pharmacologically active substances identified through a test according to claim 10 for manufacture of a pharmaceutical and/or diagnostic, wherein at least one pharmacologically active substances is combined with suitable auxiliaries and/or additives.
32. A method of using pharmacologically active substances identified through a test according to claims 10, for diagnosis, prevention and/or treatment of diseases, especially of diseases of the skin and for diagnosis and/or treatment of wound healing and/or disorders of wound healing.
33. A method of using according to at least one of claims 16, 22 to 28 and 31 to 32, wherein the disorder of wound healing is an ulcer of the skin, preferably a venous ulcer.
34. A method of using according to at least one of 16, 22 to 28 and 31 to 32, wherein the skin disease is psoriasis.